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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,547	09/17/2001	Mark Greenberg	04259P076	9819

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EXAMINER

CHUNG, PHUNG M

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,547

Applicant(s)

GREENBERG ET AL.

Examiner

Phung My Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-36 is/are allowed.
- 6) ☒ Claim(s) 1,4,6,10,13,15,19,22,24 and 37 is/are rejected.
- 7) ☒ Claim(s) 2,3,5,7-9,11,12,14,16-18,20,21,23,25-27,38 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/3/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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1. Claim 18 is objected to because of the following informalities: line 1, "The method of claim 10" must be changed to - - The method of claim 16 - -. Correction is required.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4, 6, 10, 13, 15, 19, 22, 24 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catherwood (2002/0188640) in view of Snyder, Jr. (5,841,796).

As per claim 1, Catherwood disclose a system for overflow and saturation processing during accumulator operation, comprising:

A first adder (90) to add a first operand value to a second operand value to generate a first path metric value; and

Saturating logic (120) to detect a saturating condition when a most significant bit of the first path metric value is a specified value;

The saturating logic arranged to select the first path metric value to for a first state metric when the saturating condition is not detected and alternatively to select a predetermined maximum value to form the first state metric when the saturating condition is detected. (See Fig. 2, pg. 2, paragraph (0018)-(0021)). Catherwood does not disclose that the inputs (first and second operands) of the adder (90) are first branch metric value and previous path metric value. However, Snyder, Jr. discloses such an adder (21) for adding the inputs of a current branch metric with a previous path metric to generate a current path metric. (See Fig. 2 and col. 2, lines 57). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the adder by adding the inputs of a current branch metric with a previous path metric to generate a current path metric as taught by Snyder, Jr. to eliminates the need for a normalization function to prevent overflow and simplifies the hardware necessary for calculating the path metric. (See col. 2, lines 21-26).

As per claim 4, the teaching of Catherwood and Snyder, Jr. have been discussed above. Catherwood further discloses a multiplexer (95) (pg. 2, pagraph (0018)).

As per claim 6, the teaching of Catherwood and Snyder, Jr. have been discussed above. They do not specifically disclose that the predetermined value is 7h7f. However, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to set the predetermined value as 7h7f. This is because

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Catherwood discloses the predetermined value (e.g., 0x7FFFFFFFFF). (See pg. 2, paragraph (0019)).

As per claims 10, 19 and 37, these claims are also rejected under the same rationale as set forth in claim 1.

As per claims 13, and 22, these claims are also rejected under the same rationale as set forth in claim 4.

As per claims 15 and 24, these claims are also rejected under the same rationale as set forth in claim 6.

4. Claims 2-3, 5, 7-9, 11-12, 14, 16-18, 20-21, 23, 25-27 and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 28-36 are allowable.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Phung My Chung
Primary Patent Examiner
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